



11-9-07

Attorney's Docket No.: 08625-006US1 / 2506US

SFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ching et al.  
Serial No. : 10/582,048  
Filed : March 6, 2007  
Conf. No. : 20985  
Title : CATIONIC OLIGOMER OF A SACCHARIDE FOR RESOLVING  
ENANTIOMERS AND ASYMMETRIC SYNTHESIS

Art Unit : 4173  
Examiner : Jonathan S. Lau  
Conf. No. : 1604

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

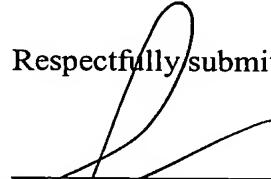
**TRANSMITTAL LETTER**

Dear Sir:

Transmitted herewith are a Request for Corrected Publication in Accordance with 37 C.F.R. §1.221(b) (3 pages), Hand-Annotated Sheets (2 pages), a copy of the Preliminary Amendment dated 7 June 2006 (11 pages), and a return postcard for filing in connection with the above-identified application.

The Commissioner is hereby authorized to charge any fees that may be due in connection with this paper or with this application during its entire pendency to Deposit Account No. 06-1050. A duplicate of this sheet is enclosed.

Respectfully submitted,

  
Stephanie Seidman  
Reg. No. 33,779

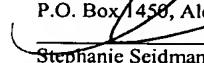
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Address all correspondence to:

Stephanie Seidman  
Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-4777  
Facsimile: (202) 626-7796  
email: seidman@fr.com

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Date of Deposit November 7, 2007

I hereby certify that this paper is being deposited with the United States Postal "Express Mail Post Office to Addressee" Service under 37 CFR §1.10 on the date indicated above and is addressed to: Commissioner for Patents, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

  
Stephanie Seidman



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ching et al. Art Unit : 4173  
Serial No. : 10/582,048 Examiner : Jonathan S. Lau  
Filed : March 6, 2007 Conf. No. : 1604  
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Title : CATIONIC OLIGOMER OF A SACCHARIDE FOR RESOLVING  
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**Mail Stop PGPUB**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED PUBLICATION

Applicant hereby requests a Corrected Publication. The above-identified application, which Published on 9/27/2007 as Publication Number US 2007-0225490 A1, contained the following errors that were created by the USPTO:

**On page 14 (Claim 12):**

On page 14, Column II of the published application, in Claim 12, within the description of R, the PTO incorrectly printed “<sub>2</sub>0” instead of “<sub>2</sub>0” for list item “(C<sub>1</sub>-C<sub>2</sub>0)alkyl,”. Please replace “<sub>2</sub>0” with “<sub>2</sub>0” such that the list item now reads as “(C<sub>1</sub>-C<sub>2</sub>0)alkyl,”. This correction is supported in the application as filed on page 47, line 2.

**On page 14 (Claim 15):**

On page 14, Column II of the published application, in Claim 15, the PTO incorrectly inserted the word “to” into the recitation “a saccharide to of claim 14”. Please delete the word “to” such that the recitation now reads as “a saccharide of claim 14”. This correction is supported on page 8 of the Preliminary Amendment, filed on 7 June 2006, a copy of which is attached as evidence.

On page 14, Column II of the published application, in Claim 15, the PTO incorrectly omitted the phrase “linear or branched” from the recitation “wherein R<sub>9</sub> is (C<sub>1</sub>-C<sub>2</sub>0)alkyl,”. Please insert the phrase “linear or branched” such that the recitation now reads as “wherein R<sub>9</sub> is linear or branched (C<sub>1</sub>-C<sub>2</sub>0)alkyl,”. This correction is supported in the application as filed on page 47, lines 17-18.

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"Express Mail" Mailing Label Number EV 965982846 US  
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I hereby certify that this paper is being deposited with the United States Postal "Express Mail Post Office to Addressee" Service under 37 CFR § 1.10 on the date indicated above and is addressed to: Commissioner for Patents, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

Stephanie Seidman

**On page 15 (Claim 16):**

On page 15, Column I of the published application, in Claim 16, the PTO incorrectly omitted the word “in” from the recitation “as defined claim 1”. Please insert the word “in” such that the recitation now reads as “as defined in claim 1”. This correction is supported on page 8 of the Preliminary Amendment, filed on 7 June 2006, a copy of which is attached as evidence.

**On page 15 (Claim 26):**

On page 15, Column I of the published application, in Claim 26, the PTO incorrectly printed the word “of” between the words “providing” and “a”, and also incorrectly printed a period instead of a semicolon in the recitation “providing of a cationic oligomer of a saccharide as defined in claim 1 as a chiral agent.”. Please delete the word “of” between the words “providing” and “a”, and replace the period with a semicolon such that the recitation now reads as “providing a cationic oligomer of a saccharide as defined in claim 1 as a chiral agent;”. This correction is supported on page 9 of the Preliminary Amendment, filed on 7 June 2006, a copy of which is attached as evidence.

Applicant : Ching et al.  
Serial No. : 10/582,048  
Filed : March 6, 2007

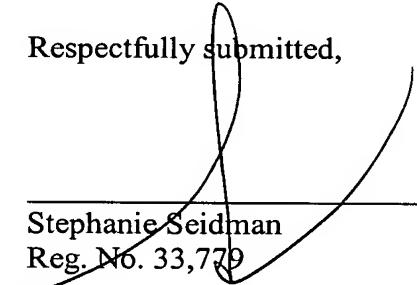
Attorney's Docket No.: 08625-006US1 / 2506US  
**Request for Corrected Publication**

**REMARKS**

This Request for Corrected Publication seeks to correct typographical errors in the claims introduced by the Patent and Trademark Office for publication. Applicant respectfully requests issuance of a corrected publication.

It is believed no fee is due. However, if it is determined that a fee is due, the Office is hereby authorized to charge the fee to Deposit Account No. 06-1050.

Respectfully submitted,

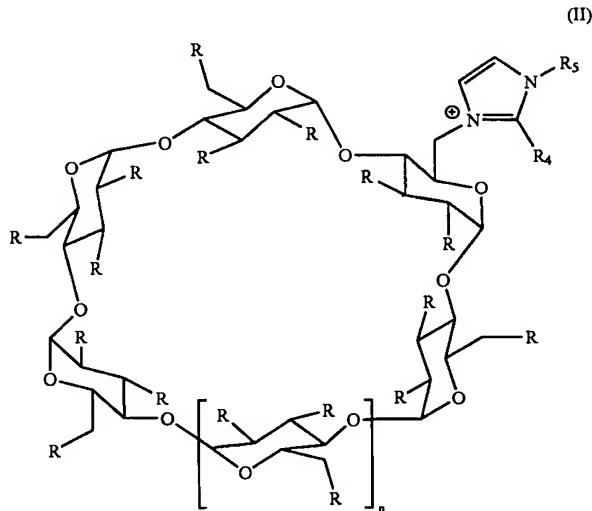
  
Stephanie Seidman  
Reg. No. 33,779

Attorney Docket No. 08625-006US1 / 2506US  
Address all correspondence to:

Stephanie Seidman  
Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-4777  
Facsimile: (202) 626-7796  
email: seidman@fr.com

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**10.** A cationic oligomer of a saccharide of the general formula (II)



wherein

n=0 to 8;

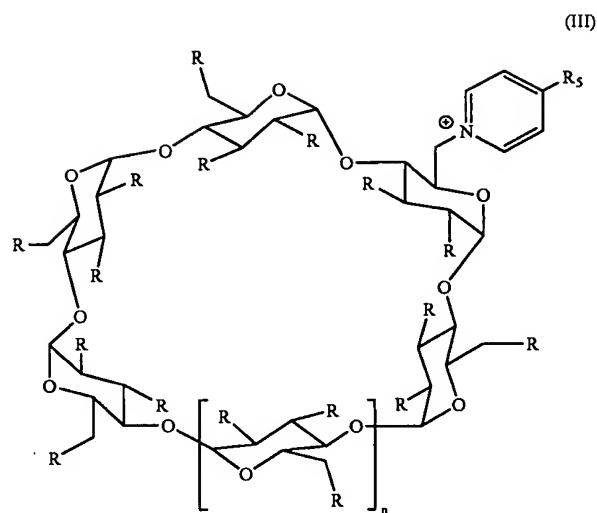
R is a hydroxyl, an ester, a carbamate, a carbonate, a phosphinate, a phosphonate, a phosphate, a sulfinate, a sulfite, a sulfonate, a sulphate, or R'O—, wherein R' is linear or branched chain (C<sub>1</sub>-C<sub>20</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, carboxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, aryl, or aryl(C<sub>1</sub>-C<sub>20</sub>)alkyl;

R<sub>4</sub> is hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, or cycloalkyl; and

R<sub>5</sub> is hydrogen, 2-(2-ethoxyethoxy)ethyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, or cycloalkyl.

**11.** The cationic oligomer of a saccharide according to claim 10, wherein R<sub>4</sub> is hydrogen or methyl.

**12.** A cationic oligomer of a saccharide of the general formula (III)



wherein

n=0 to 8;

R is a hydroxyl, an ester, a carbamate, a carbonate, a phosphinate, a phosphonate, a phosphate, a sulfinate, a sulfite, a sulfonate, a sulphate, or R'O—, wherein R' is linear or branched [(C<sub>1</sub>-C<sub>20</sub>)alkyl], hydroxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, carboxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, aryl, or aryl(C<sub>1</sub>-C<sub>20</sub>)alkyl; and

R<sub>5</sub> is hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, cycloalkyl, or NR<sub>6</sub>R<sub>7</sub>, wherein R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, and cycloalkyl.

**13.** The cationic oligomer of a saccharide of claim 1, wherein n is 1, 2, or 3.

**14.** The cationic oligomer of a saccharide of claim 1, further comprising a counterion.

**15.** The cationic oligomer of a saccharide of claim 14, wherein the counterion is fluoride, chloride, bromide, iodide, nitrate, HCO<sub>3</sub><sup>2-</sup>, CO<sub>3</sub><sup>2-</sup>, HSO<sub>4</sub><sup>-</sup>, BF<sub>4</sub><sup>-</sup>, BCl<sub>4</sub><sup>-</sup>, PF<sub>6</sub><sup>-</sup>, SbF<sub>6</sub><sup>-</sup>, AsF<sub>6</sub><sup>-</sup>, AlCl<sub>4</sub><sup>-</sup>, R<sub>9</sub>-CO<sub>2</sub><sup>-</sup> or R<sub>9</sub>-SO<sub>3</sub><sup>-</sup>, wherein R<sub>9</sub> is (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, cycloalkyl, or aryl(C<sub>1</sub>-C<sub>20</sub>)alkyl.

*in*

16. A method of preparing a cationic oligomer of a saccharide as defined in claim 1 comprising reacting an amine, a phosphine, an imidazole, or a pyridine with an oligomer of the saccharide having a leaving group.

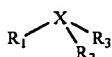
17. The method of claim 16, wherein the leaving group is a halide, a mesylate, a tosylate, a triflate, or a haloformate ester group.

18. The method of claim 17, wherein the halide is an iodide, bromide, or chloride.

19. The method of claim 16, wherein the leaving group is a tosylate.

20. The method of claim 16, wherein the oligomer of a saccharide is mono-6-deoxy-6-tosyl cyclodextrin or mono-2-deoxy-2-tosyl cyclodextrin.

21. The method of claim 16, wherein the amine and phosphine are

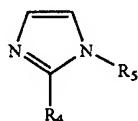


wherein R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> are defined as in claim 1.

22. The method of claim 21, wherein X is nitrogen.

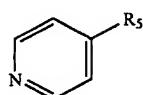
23. The method of claim 21, wherein X is phosphorous.

24. The method of claim 16, wherein the imidazole is



wherein R<sub>4</sub> and R<sub>5</sub> are defined as in claim 1.

25. The method of claim 16, wherein the pyridine is



wherein R<sub>5</sub> is defined as in claim 1.

26. A method for enantiomeric separation of a mixture of racemates, comprising:

providing a cationic oligomer of a saccharide as defined in claim 1 as a chiral agent;

mixing the cationic oligomer of the saccharide with the mixture of racemates; and enantioseparating the racemates by a chromatographic method.

27. The method of claim 26, wherein the chromatographic method is selected from the group consisting of gas chromatography (GC), liquid chromatography (LC), high performance liquid chromatography (HPLC), capillary electrophoresis (CE), and sub or supercritical fluid chromatography (SFC).

28. A method for asymmetric synthesis of a compound, comprising:

providing a cationic oligomer of a saccharide as defined in claim 1 as a chiral agent; and

performing the asymmetric synthesis reaction in the presence of the chiral agent.

29. The method of claim 28, wherein the asymmetric synthesis is a reduction or a pericyclic reaction.

30. The method of claim 29, wherein the pericyclic reaction is an ene or a Diels Alder reaction.

31. The cationic oligomer of a saccharide of claim 10, wherein n is 1, 2, or 3.

32. The cationic oligomer of a saccharide of claim 12, wherein n is 1, 2, or 3.

33. The cationic oligomer of a saccharide of claim 10, further comprising a counterion.

34. The cationic oligomer of a saccharide of claim 12, further comprising a counterion.

35. A method of preparing a cationic oligomer of a saccharide as defined in claim 10, comprising reacting an amine, a phosphine, an imidazole, or a pyridine with an oligomer of the saccharide having a leaving group.

36. A method of preparing a cationic oligomer of a saccharide as defined in claim 12, comprising reacting an amine, a phosphine, an imidazole, or a pyridine with an oligomer of the saccharide having a leaving group.

37. A method for enantiomeric separation of a mixture of racemates, comprising:

providing a cationic oligomer of a saccharide as defined in claim 10 as a chiral agent;

mixing the cationic oligomer of the saccharide with the mixture of racemates; and

enantioseparating the racemates by a chromatographic method.

38. A method for enantiomeric separation of a mixture of racemates, comprising:

providing a cationic oligomer of a saccharide as defined in claim 12 as a chiral agent;

mixing the cationic oligomer of the saccharide with the mixture of racemates; and

enantioseparating the racemates by a chromatographic method.

39. A method for asymmetric synthesis of a compound, comprising:

providing a cationic oligomer of a saccharide as defined in claim 10 as a chiral agent; and

performing the asymmetric synthesis reaction in the presence of the chiral agent.

40. A method for asymmetric synthesis of a compound, comprising:

providing a cationic oligomer of a saccharide as defined in claim 12 as a chiral agent; and

performing the asymmetric synthesis reaction in the presence of the chiral agent.

\* \* \* \* \*

Attorney's Docket No.: 08625-004US1 / 2504US  
AP3 Rec'd PCT/PTO 67 JUN 2006  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : CHING *et al.* Art Unit : Unknown  
U.S. National Stage of PCT/SG2004/000413 Examiner : Unknown  
Serial No. : To Be Assigned  
Filed : Herewith  
Title : **CATIONIC OLIGOMER OF A SACCHARIDE FOR RESOLVING  
ENANTIOMERS AND ASYMMETRIC SYNTHESIS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT**

Dear Sir:

Preliminary to the examination of the above-captioned application, please amend the application as follows.

**Amendments to the specification** begin on page 2 of this paper.

**Amendments to the claims** are reflected in the listing of the claims which begin on page 3 of this paper.

**Remarks/Arguments** begin on page 10 of this paper.

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Stephanie Seidman

Applicant : Li et al.  
U.S. Nation Stage of PCT/SG2004/000413  
Serial No. : To Be Assigned  
Filed : Herewith

Attorney's Docket No.: 08625-004US1 / 2504US  
**Preliminary Amendment**

**AMENDMENTS TO THE SPECIFICATION:**

Please amend the paragraph on page 1, lines 4-6 as follows:

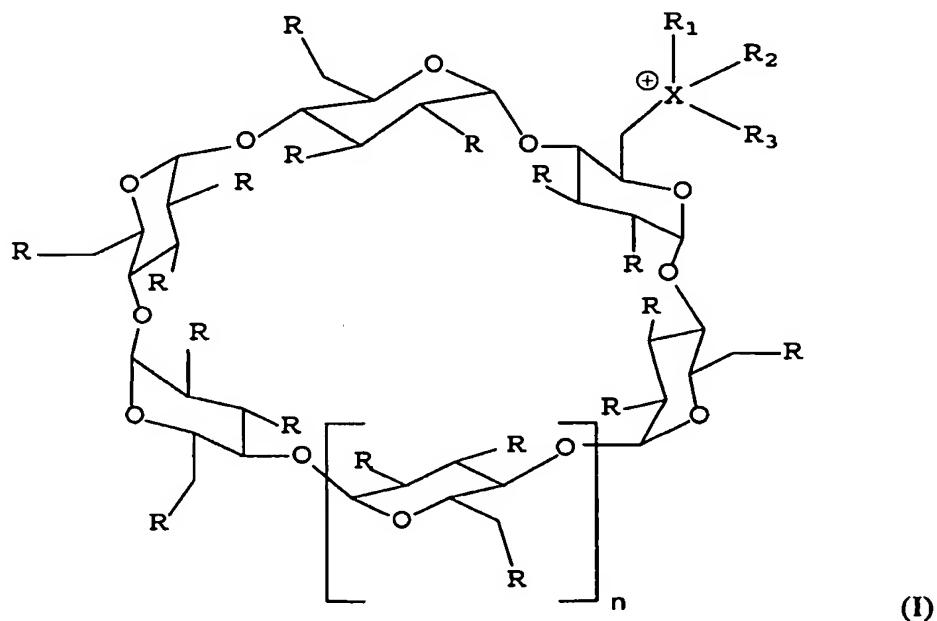
This application is the national stage of International PCT application No.  
PCT/SG2004/000413, filed December 15, 2004, which claims the benefit of U.S. provisional  
application Serial No. 60/529,112, filed December 15, 2003, which is incorporated herein by  
reference.

### AMENDMENTS TO THE CLAIMS:

Claims 1-40 are pending. Claims 1, 4, 7, 9, 13-21 and 24-30 are amended herein. Claims 31-40 are added herein. This listing of claims will replace all prior versions, and listings of claims, in the application.

### LISTING OF CLAIMS:

1. (Currently amended) A cationic oligomer of a saccharide of the general formula (I);



wherein:

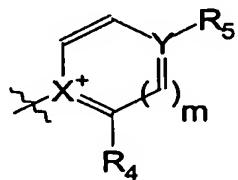
n = 0 to 8;

X is nitrogen or phosphorous phosphorus;

R is a hydroxyl, an ester, a carbamate, a carbonate, a phosphinate, a phosphonate, a phosphate, a sulfinate, a sulfite, a sulfonate, a sulphate, or R'O-, wherein R' is linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, carboxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, aryl, or aryl(C<sub>1</sub>-C<sub>20</sub>)alkyl; and

R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are each independently selected from the group consisting of hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, and cycloalkyl; or

R<sub>1</sub> is absent, and R<sub>2</sub> and R<sub>3</sub> are taken together with X to form a ring having the following structure:



wherein m = 0 or 1;

Y is carbon or nitrogen;

R<sub>4</sub> is hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, or cycloalkyl; and

R<sub>5</sub> is hydrogen, 2-(2-ethoxyethoxy)ethyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, cycloalkyl, or NR<sub>6</sub>R<sub>7</sub>, wherein R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, and cycloalkyl.

2. (Original) The cationic oligomer of a saccharide according to claim 1, wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are each independently selected from the group consisting of hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, and cycloalkyl.

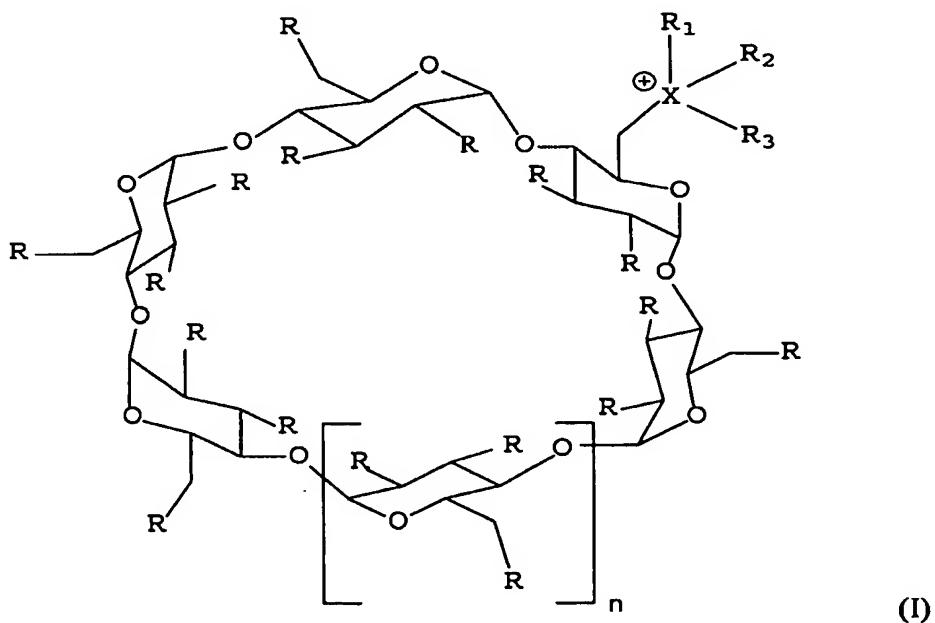
3. (Original) The cationic oligomer of a saccharide according to claim 2, wherein X is nitrogen.

4. (Currently amended) The cationic oligomer of a saccharide according to claim 2, wherein X is phosphorous phosphorus.

5. (Original) The cationic oligomer of a saccharide according to claim 1, wherein R<sub>1</sub> is absent, R<sub>2</sub> and R<sub>3</sub> form a ring, X is nitrogen, Y is nitrogen, and m is 0.

6. (Original) The cationic oligomer of a saccharide according to claim 1, wherein R<sub>1</sub> is absent, R<sub>2</sub> and R<sub>3</sub> form a ring, X is nitrogen, Y is carbon, and m is 1.

7. (Currently amended) A cationic oligomer of a saccharide of the general formula (I):



wherein:

n = 0 to 8;

X is nitrogen or phosphorous phosphorus;

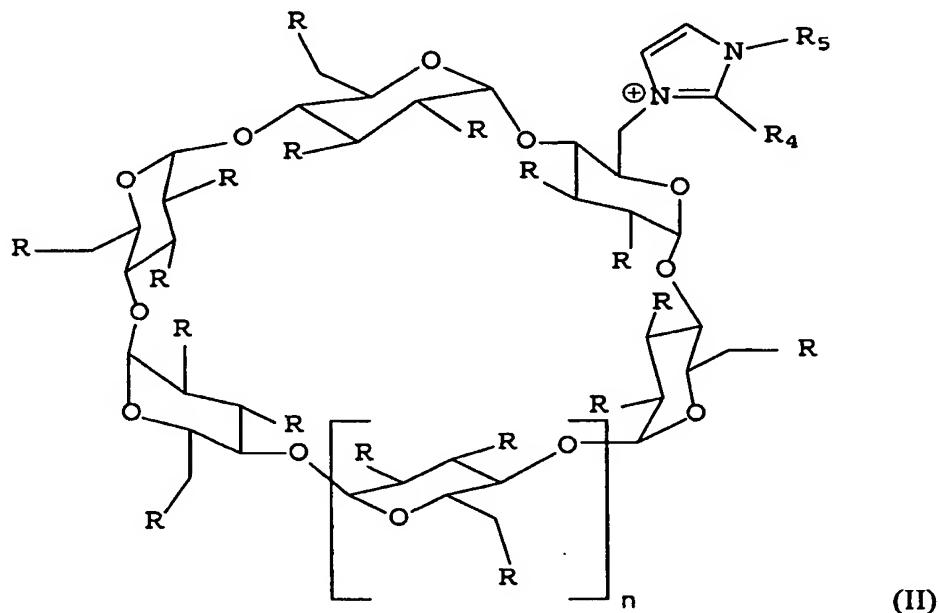
R is a hydroxyl, an ester, a carbamate, a carbonate, a phosphinate, a phosphonate, a phosphate, a sulfinate, a sulfite, a sulfonate, a sulphate, or R'O-, wherein R' is linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, carboxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, aryl, or aryl(C<sub>1</sub>-C<sub>20</sub>)alkyl; and

R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are each independently selected from the group consisting of hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, and cycloalkyl.

8. (Original) The cationic oligomer of a saccharide according to claim 7, wherein X is nitrogen.

9. (Currently amended) The cationic oligomer of a saccharide according to claim 7, wherein X is phosphorous phosphorus.

10. (Original) A cationic oligomer of a saccharide of the general formula (II)



wherein

n = 0 to 8;

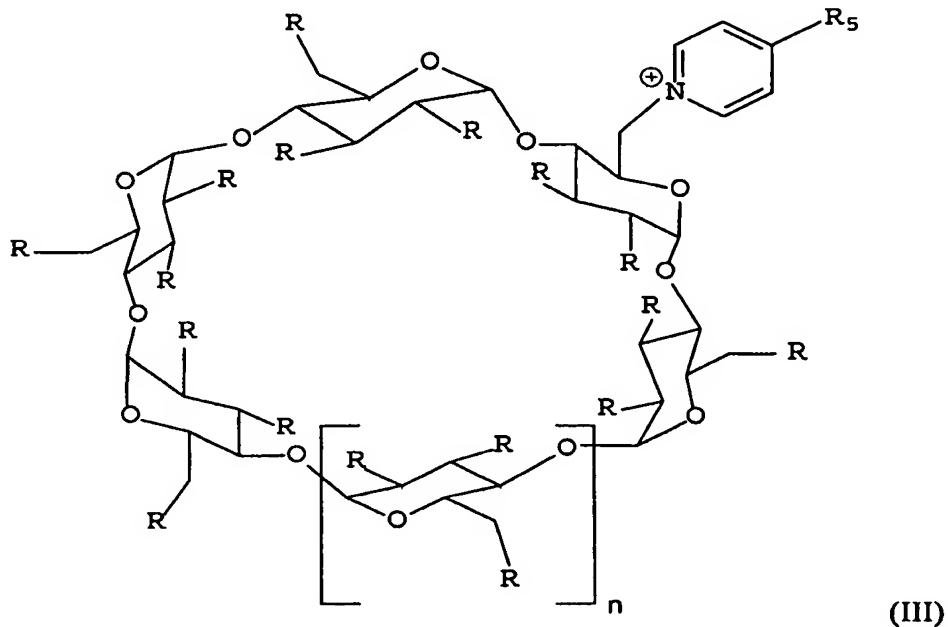
R is a hydroxyl, an ester, a carbamate, a carbonate, a phosphinate, a phosphonate, a phosphate, a sulfinate, a sulfite, a sulfonate, a sulphate, or R'O-, wherein R' is linear or branched chain (C<sub>1</sub>-C<sub>20</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, carboxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, aryl, or aryl(C<sub>1</sub>-C<sub>20</sub>)alkyl;

R<sub>4</sub> is hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, or cycloalkyl; and

R<sub>5</sub> is hydrogen, 2-(2-ethoxyethoxy)ethyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, or cycloalkyl.

11. (Original) The cationic oligomer of a saccharide according to claim 10, wherein R<sub>4</sub> is hydrogen or methyl.

12. (Original) A cationic oligomer of a saccharide of the general formula (III)



wherein

n = 0 to 8;

R is a hydroxyl, an ester, a carbamate, a carbonate, a phosphinate, a phosphonate, a phosphate, a sulfinate, a sulfite, a sulfonate, a sulphate, or R'O-, wherein R' is linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, carboxy(C<sub>1</sub>-C<sub>20</sub>)alkyl, aryl, or aryl(C<sub>1</sub>-C<sub>20</sub>)alkyl; and

R<sub>5</sub> is hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, cycloalkyl, or NR<sub>6</sub>R<sub>7</sub>, wherein R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of hydrogen, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkenyl, linear or branched (C<sub>1</sub>-C<sub>20</sub>)alkynyl, and cycloalkyl.

13. (Currently amended) The cationic oligomer of a saccharide ~~according to any one of claims 1 to 12 of claim 1~~, wherein n is 1, 2, or 3.

14. (Currently amended) The cationic oligomer of a saccharide ~~according to any one of claims 1 to 13 of claim 1~~, further comprising a counterion.

15. (Currently amended) The cationic oligomer of a saccharide ~~according to of claim 14~~, wherein the counterion is fluoride, chloride, bromide, iodide, nitrate,  $\text{HCO}_3^-$ ,  $\text{CO}_3^{2-}$ ,  $\text{HSO}_4^-$ ,  $\text{BF}_4^-$ ,  $\text{BCl}_4^-$ ,  $\text{PF}_6^-$ ,  $\text{SbF}_6^-$ ,  $\text{AsF}_6^-$ ,  $\text{AlCl}_4^-$ ,  $\text{R}_9\text{-CO}_2^-$  or  $\text{R}_9\text{-SO}_3^-$ , wherein  $\text{R}_9$  is linear or branched ( $\text{C}_1\text{-C}_{20}$ )alkyl, linear or branched ( $\text{C}_1\text{-C}_{20}$ )alkenyl, linear or branched ( $\text{C}_1\text{-C}_{20}$ )alkynyl, cycloalkyl, or aryl( $\text{C}_1\text{-C}_{20}$ )alkyl.

16. (Currently amended) A method of preparing a cationic oligomer of a saccharide as defined in ~~any one of claims 1 to 15 of claim 1~~, comprising reacting an amine, a phosphine, an imidazole, or a pyridine with [[a]] ~~an~~ oligomer of [[a]] ~~the~~ saccharide having a leaving group.

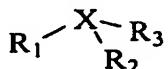
17. (Currently amended) The method ~~according to of claim 16~~, wherein the leaving group is a halide, a mesylate, a tosylate, a triflate, or a haloformate ester group.

18. (Currently amended) The method ~~according to of claim 17~~, wherein the halide is an iodide, bromide, or chloride.

19. (Currently amended) The method ~~according to any one of claims 16 to 18 of claim 16~~, wherein the leaving group is a tosylate.

20. (Currently amended) The method ~~according to any one of claims 16 to 19 of claim 16~~, wherein the oligomer of a saccharide is mono-6-deoxy-6-tosyl cyclodextrin or mono-2-deoxy-2-tosyl cyclodextrin.

21. (Currently amended) The method ~~according to any of claims 16 to 20 of claim 16~~, wherein the amine and phosphine are

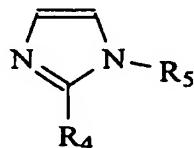


wherein  $R_1$ ,  $R_2$ , and  $R_3$  are defined as in claim 1.

22. (Original) The method of claim 21, wherein X is nitrogen.

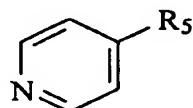
23. (Original) The method of claim 21, wherein X is phosphorous.

24. (Currently amended) The method ~~according to any one of claims 16 to 20 of claim 16~~, wherein the imidazole is



wherein R<sub>4</sub> and R<sub>5</sub> are defined as in claim 1.

25. (Currently amended) The method ~~according to any one of claims 16 to 20 of claim 16~~, wherein the pyridine is



wherein R<sub>5</sub> is defined as in claim 1.

26. (Currently amended) Use A method for enantiomeric separation of a mixture of racemates, comprising:

providing of a cationic oligomer of a saccharide as defined in ~~any of claims 1 to 15~~ claim 1 as a chiral agent;

mixing the cationic oligomer of the saccharide with the mixture of racemates; and for an enantiomeric separation enantioseparating the racemates by a chromatographic method.

27. (Currently amended) The use method of claim 26, wherein the chromatographic method is selected from the group consisting of gas chromatography (GC), liquid chromatography (LC), high performance liquid chromatography (HPLC), capillary electrophoresis (CE), and sub or supercritical fluid chromatography (SFC).

28. (Currently amended) Use of A method for asymmetric synthesis of a compound, comprising:

providing a cationic oligomer of a saccharide as defined in ~~any of claims 1 to 15~~ claim 1 as a chiral agent; and

performing the for an asymmetric synthesis reaction in the presence of the chiral agent.

29. (Currently amended) The use method of claim 28, wherein the asymmetric synthesis is a reduction or a pericyclic reaction.

30. (Currently amended) The use method of claim 29, wherein the pericyclic reaction is an ene or a Diels Alder reaction.
31. (New) The cationic oligomer of a saccharide of claim 10, wherein n is 1, 2, or 3.
32. (New) The cationic oligomer of a saccharide of claim 12, wherein n is 1, 2, or 3.
33. (New) The cationic oligomer of a saccharide of claim 10, further comprising a counterion.
34. (New) The cationic oligomer of a saccharide of claim 12, further comprising a counterion.
35. (New) A method of preparing a cationic oligomer of a saccharide as defined in claim 10, comprising reacting an amine, a phosphine, an imidazole, or a pyridine with an oligomer of the saccharide having a leaving group.
36. (New) A method of preparing a cationic oligomer of a saccharide as defined in claim 12, comprising reacting an amine, a phosphine, an imidazole, or a pyridine with an oligomer of the saccharide having a leaving group.
37. (New) A method for enantiomeric separation of a mixture of racemates, comprising: providing a cationic oligomer of a saccharide as defined in claim 10 as a chiral agent; mixing the cationic oligomer of the saccharide with the mixture of racemates; and enantioseparating the racemates by a chromatographic method.
38. (New) A method for enantiomeric separation of a mixture of racemates, comprising: providing a cationic oligomer of a saccharide as defined in claim 12 as a chiral agent; mixing the cationic oligomer of the saccharide with the mixture of racemates; and enantioseparating the racemates by a chromatographic method.
39. (New) A method for asymmetric synthesis of a compound, comprising: providing a cationic oligomer of a saccharide as defined in claim 10 as a chiral agent; and performing the asymmetric synthesis reaction in the presence of the chiral agent.
40. (New) A method for asymmetric synthesis of a compound, comprising: providing a cationic oligomer of a saccharide as defined in claim 12 as a chiral agent; and performing the asymmetric synthesis reaction in the presence of the chiral agent.

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Preliminary Amendment

### REMARKS

Any fees that may be due in connection with the filing of this paper or with this application may be charged to Deposit Account No. 06-1050. If a Petition for Extension of time is needed, this paper is to be considered such Petition.

The specification is amended to update the "Related Applications" section to state that the instant application is the U.S. national stage of International PCT application No. PCT/SG2004/000413.

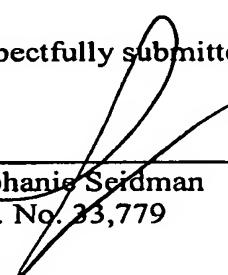
Claims 1-40 are pending. Claims 1, 4, 7, 9, 13-21 and 24-30 are amended herein. Claims 1, 4, 7, 9, 15, 17 and 18 are amended to correct typographical errors and formatting. Claims 13, 14, 16, 19-21, 24 and 25 are amended to remove multiple dependency. Claims 26-30 are amended to comport with U.S. patent practice, restating the "use" claims as "method" claims. Basis for the amendments can be found throughout the specification (e.g., see pages 22-23).

Claims 31-40 are added herein. Basis for added claims is found throughout the specification. For example, basis for added claims 31 and 32 is found in original claim 13. Basis for added claims 33 and 34 is found in original claim 14. Basis for added claims 35 and 36 is found in original claim 16. Basis for added claims 37 and 38 is found in original claim 26. Basis for assed claims 39 and 40 is found in original claim 28. No new matter is added.

\* \* \*

Entry of this amendment and examination of the application are respectfully requested.

Respectfully submitted,

  
Stephanie Seidman  
Reg. No. 33,779

Attorney Docket No. 08625-004US1 / 2504US

Address all correspondence to:

Stephanie Seidman  
Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-5070  
Facsimile: (202) 626-7796  
email: seidman@fr.com